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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/779,970

02/17/2004

Carl K. Esche JR.

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63970

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03/13/2008

MH2 TECHNOLOGY LAW GROUP (Cust. No. w/NewMarket)

1951 KIDWELL DRIVE

SUITE 550

TYSONS CORNER, VA 22182

EXAMINER

GOLOBOY, JAMES C

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

03/13/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/779,970	<b>Applicant(s)</b> ESCHE, CARL K.	
	<b>Examiner</b> James Goloboy	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 8-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 6-34, 37-39, 42-44 is/are allowed.
- 6) ☒ Claim(s) 35, 36, 40 and 41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Applicant's amendments filed 11/29/07 overcome all outstanding rejections in the office action mailed 8/29/07 and render claims 1-5, 8-34, and 37-39 allowable. Newly added claims 42-44 are also allowable. The rejection of claims 35-36 is maintained, and newly added claims 40-41 are rejected for the reasons set forth below.

#### ***Claim Rejections - 35 USC § 103***

2. Claims 35-36 and 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Germanaud in view of Kapuscinski.

In column 1 lines 9-11, Germanaud discloses a polymeric compound useful as a lubricant additive. In the abstract, Germanaud teaches that the additive is formed by the condensation of a primary or secondary amine or a polyalkylenediamine with a copolymer containing vicinal carboxylic groups. In column 6 lines 1-14, Germanaud teaches that the polyalkylenediamine such as N-aminopropylphenothiazine is prepared by cyanoethylation of phenothiazine with acrylonitrile followed by reduction to the primary amine. In column 3 lines 41-42 Germanaud teaches that the polyalkylenediamine can also be a derivative of naphthylamine, an aromatic amine as in claims 35-36 and 40-41, and teaches in column 3 lines 55-56 that this derivative would be N-aminopropyl-2-naphthylamine, which would be derived from naphthylamine by the same cyanoethylation and reduction process used for phenothiazine, and would therefore meet the limitations of the treated amine of claims 35-36 and 40-41. In column 5 lines 10-12, Germanaud teaches that the copolymer can be formed by grafting an

Art Unit: 1797

unsaturated acid onto a hydrocarbon polymer, and teaches in column 5 lines 23-24 and 38-39 that ethylene-propylene copolymers are preferred hydrocarbon copolymers.

Germanaud discloses in column 5 lines 40-44 that the copolymer has a molecular weight between 20,000 and 500,000. The final product will therefore have a molecular weight overlapping the range recited in claim 1. The copolymer of Germanaud therefore meets the limitations of the copolymer of claims 35-36 and 40-41. Germanaud does not disclose a fuel composition containing the additive.

Kapuscinski, in the abstract, discloses an additive for both lubricants and fuels consisting of an ethylene-propylene copolymer bearing units derived from phenothiazine. In column 1 lines 26-39 Kapuscinski teaches that these additives perform as dispersant-viscosity index improvers, as do the additives of Germanaud. In column 7 lines 47-53, Kapuscinski teaches that the additive is effective in a concentration of 0.25 to 250 pounds per thousand barrels of diesel fuel, preferably 10 to 100 pounds, or 25 pounds per thousand barrels of diesel fuel, meeting the limitation of the concentration of claims 40-41. The use of the additive of Germanaud as the additive in the fuel of Kapuscinski meets the limitations of claims 35-36 and 40-41.

It would have been obvious to one of ordinary skill in the art to use the additive of Germanaud in a fuel in the concentration taught by Kapuscinski, as Kapuscinski teaches that it is an effective concentration for an additive having similar structure and functionality.

***Allowable Subject Matter***

3. Claims 1-5, 8-34, 37-39, and 42-44 are allowed. Claim 19 has been amended to limit the aliphatic amines to certain amines, overcoming the rejections over Soula and Kluger in the office action mailed 8/29/07. The independent claims except claim 35 have also been amended to limit the aromatic amine to N-arylphenylenediamines, overcoming the rejections over Germanaud in the office action mailed 8/29/07. Newly added claims 42-44 limit the compositions to those comprising the reaction product of specific treated amines with either a hydrocarbyl succinic anhydride or a Mannich adduct. The Soula and Kluger references do not teach or suggest the claimed amines and Germanaud only discloses the reaction of the amine with a copolymer containing carboxylic groups. The prior art of record therefore does not teach or suggest claims 1-5, 8-34, 37-39, and 42-44.

King (U.S. Pat. No. 4,178,259) discloses a lubricating composition comprising the reaction product of an alkylphenol, formaldehyde, and a treated amine, but the treated amines are formed from diamines, which are not among the amines recited in claims 1-5, 8-34, 37-39, and 42-44.

***Response to Arguments***

4. Applicant argues that there is no suggestion of motivation for using the additive of Germanaud in a fuel. However, Kapuscinski generally discloses a phenothiazine-functionalized ethylene-propylene copolymer as an effective fuel additive, and

Germanaud discloses a specific phenothiazine-functionalized ethylene-propylene copolymer. One of ordinary skill in the art clearly would have had a reasonable expectation of success in using the specific copolymer of Germanaud for an application in which Kapuscinski teaches that the type of copolymer is generally effective, especially as the copolymers of Germanaud are disclosed as dispersant-viscosity index improvers, as are the copolymers of Kapuscinski.

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Goloboy whose telephone number is (571)272-2476. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCG

/Glenn A Caldarola/  
Acting SPE of Art Unit 1797